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## TEN DAYS WITH DR HENRI MARTIN AT LA QUINA

By CHARLES PEABODY

FROM September 17 to September 28, 1913, it was the writer's good fortune to be the guest of Dr Henri Martin at his country place near the Mousterian station of La Quina.

Geographically and topographically the site may be thus described: It is about three kilometers northeast of Villebois-Lavalette, itself a cheerful little village on a secondary railway, about 30 kilometers southeast of Angoulême; its latitude is about  $45^{\circ}$ ,  $30'$  N., and its longitude  $0^{\circ}$ ,  $20'$  E. from Greenwich. The department is Charente, midway between the famous Dordogne to the southeast and the ocean to the west. The altitude is but few meters above the sea, while the banks of the Voultron, on which La Quina is, rise from 20 to 60 meters more; farther away are heights of 180 or 190 meters. A limestone country, the valleys are likely to be long and bounded by the precipitous eroded cliffs ready prepared by nature for the protection of prehistoric man. The heights themselves are ridges, but not monotonous; the relief is much like that of the Ozark region of our country, without the great extent of plateau characteristic of the latter. The country is fertile, though the highlands have been largely denuded; nut-trees of various kinds and glorious poplars made a late September a revel of color and form.

The climate is warm for the latitude, temperate in winter and tempered by the sea in summer. The prevailing west winds carry in some moisture, but the sea as a whole does not modify the sensible temperature as much as one would expect. Health is the rule, and its concomitants, independence and good nature. The most important industry is the making of brandy, Cognac, the center of the industry, being in Charente, only a few kilometers to the west.

In prehistoric archeology, especially of the paleolithic period, Charente is rich. Overshadowed by the amazing plethora of

Mousterian, Aurignacian, Solutrian, and Magdalenian from the Dordogne, this department is less well known. The Charente river follows its own independent course to the sea, unconnected with the Vézère-Dordogne system, and the country is lower and seems to contain fewer inhabited rock-shelters.

With the enthusiasm of the Frenchman everywhere for his local archeology, which we should do well to imitate, the Charentais have done much in their section. The work of Favraud and Chauvet should of course be mentioned.

Seven or eight years ago Dr Henri Martin, of Paris, realizing the importance of the rock-shelter at La Quina, bought the station and has wisely kept it from depredation by the unwary and from desecration by the unscientific. For years, summer after summer, he has excavated, almost with Professor Putnam's proverbial tooth-brush, this great shelter 40 or more meters long and eight or nine meters high. Seldom using more than three workmen, and these for the purpose of carting away débris, he picks away at the breccia, aided by Madame Martin and his three enthusiastic children. He uses *piochets* and *crochets* of his own invention, and, when the breccia becomes too hard, sends son Bernhard to the Voultron for a pail of water to soften the indurated conglomerate by an ordinary squirt.

The early mornings Dr Martin spends in his delightful laboratory in the picturesque "logis," where he lives. Individual, microscopic, comparative examination, meticulous classification, complete preservation, and generous distribution are his methods. The museums at Phillips Academy, Andover; Harvard University; Yale University; Columbia University; The American Museum of Natural History, New York; The University of Pennsylvania; The Smithsonian Institution, and the University of Chicago bear witness to his liberality. It may be frankly said, without probable indiscretion, that all he asks is scientific care, record, and exhibition. An exchange is always welcome to him, especially in somatological material, in primis, crania. But any responsible institution with a dignified place of exhibition and competent curatorship seems fairly able to procure a series of La Quina specimens. What the Doctor will not do is to sell.

Excavation at La Quina, the richest under-surface station the writer has seen, is a privilege. To his knowledge but one other foreigner has been invited to excavate; this is Baron Blanc, an Italian with a chateau-residence in Chambéry.

The threatened disqualification of foreign excavators has not yet taken place (*absit omen*); Dr Martin, however, advises careful dating of La Quina specimens. All specimens at present in America, so far as knowledge goes, have been received by gift or exchange direct from Dr Martin or, by his own request or authority, from one or two of his intimate friends. Any other should justify their provenance.

La Quina has been published in extenso. This is not the place for a bibliography; it is not necessary. Reference to the standard earlier and later digests of the de Mortillet, to the first volume of Déchelette's *Manuel*, to the series of articles on the Mousterian of Le Moustier by Boursoulon, and chiefly to the work of Dr Henri Martin himself and comments thereon in *L'Anthropologie*, *Bulletins et Mémoires de l'École d'Anthropologie de Paris*, *La Revue Préhistorique*, *L'Homme Préhistorique*, *Bulletin de la Société Préhistorique Française*, and the *Comptes-Rendus des Congrès Préhistoriques de France*—this will orientate him who wills.

Of course, the local pride of the Charentais leads them to differentiate rather more than is necessary between the industry of one department and that of another; departmental divisions are quite conventional, and changes in types of specimens come gradually rather than by jumps over frontiers. The Mousterian of La Quina is surprisingly homogeneous from the lowest stratum to the highest. From the former a few recollections of the Acheulian have been reported, and suggestions of the Aurignacian from the latter. They are rare—it is strange that only 100 or 200 meters along the Voultron toward the Doctor's "logis" is, in a similar rock-shelter, an Aurignacian station, small, it is true, but altogether different from La Quina.

To an Americanist, accustomed to cultures of enormous geographical extent and striking similarity among themselves, the absolute cultural differences observable in this region within

stone-throws of each other (e. g., Laugerie-Haute and Laugerie-Basse, and a better contrast between La Quina and the Grotte de la Fontaine, 20 kilometers to the north)—this juxtaposed tossing

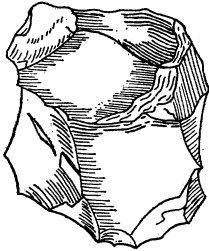


FIG. 86.



FIG. 87.

together of cultures thousands of years apart is, to repeat, a standing wonder.

According to Bourlon the Mousterian of La Quina corresponds to "Couche 3" at Le Moustier.

In 1912 the Congrès Préhistorique de France was held at Angoulême, under Dr Henri Martin's presidency, for the purpose of studying the station on the ground. Mrs Peabody and the author had the good luck to be present and to stay over a few days and help dig. The results of this redoubled digging, increased by two or three times as many specimens given outright by the Doctor himself, were sent home and were distributed into the charge of the institutions mentioned at Andover, Cambridge, and Washington. The series reserved for Harvard had been prepared by him for the Congrès International d'Anthropologie et d'Archéologie Préhistoriques, which met in October of that year in Rome; he changed his mind and sent the series to the Peabody Museum.<sup>1</sup> These

<sup>1</sup> For a general survey of the site the best reference is to the *Comptes-Rendus* of the Congress at Angoulême, 1912, pp. 282-296.

series were largely picked specimens of the type to make museum men glad. The series sent home in 1913 is just as the fortune of the pick got them out—dirt, breccia, and all. They were washed and studied here, and for that reason have alone been used for the few necessary statistics before the conclusion of this paper.

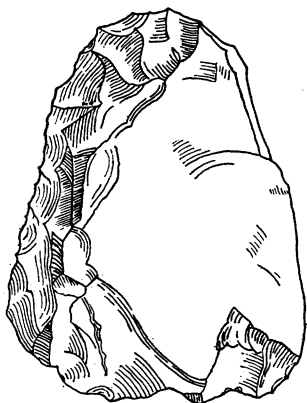


FIG. 88.



FIG. 89.



FIG. 90.

Much to the delight of his guest and the curiosity of the Martin household, a new trench was opened in the same rock-shelter about 30 meters from the work of former years. This was in the middle of September, 1913, and the writer had virgin soil. Strangely enough the whole shelter faces somewhat north of west—pleasant for the excavators but unpropitious for the Mousterians. Not knowing what horizontal stratum the new cut would correspond to, he called this one “gamma,” and the vertical “M” in line with the earlier. The collection at the site thus comes almost equally from the two positions, “M. Gamma,” and “C 2,” a former position that seems of inexhaustible richness.

There follow a few of the inevitable tabulations with comments.

The typical “pointes Moustériennes” as well as the “racloirs” are comparatively small. Large specimens have been found at La Quina, but they are rare.

Many of these smaller implements are of excellent workmanship.

When the chipped face is uppermost and the sharpest angle points to the cartographic north, the scraping edges are as shown in the table.

*Peabody Museum La Quina Collection, 1913*

	C 2.	M. GAMMA.
Pointes Moustériennes . . . . .	9	12
Pointes Moustériennes with double patination . . . . .		1
Pointes Moustériennes with concavity . . . . .	2	
Racloirs . . . . .	35	50
Racloirs with concavity . . . . .	3	6
Racloirs with suggestions of manufacture . . . . .	2	
Racloirs with double patination . . . . .	4	1
Racloir-couteau . . . . .	1	
Grattoir . . . . .	1	6
Grattoir with suggestions of manufacture . . . . .	1	
Racloir-grattoir . . . . .	1	
Knives . . . . .	4	3
Nuclei . . . . .	6	11
Chips with partly original surfaces . . . . .	92	74
Chips with no original surface . . . . .	80	118
Quartz specimens . . . . .	12	37
Fossils . . . . .	2	
TOTAL . . . . .	255	319

*Size of the Major Specimens at La Quina<sup>1</sup>*

		C 2.	M. GAMMA.
Pointes Moustériennes	Large: 8 cm. + long . . . . .	1	0
	Small; less than 8 cm. long . . . . .	8	12
	Total . . . . .	9	12
Racloirs	Long; 10 cm. + long . . . . .	0	1
	Medium; more than 7 cm. and less than 10 cm. long . . . . .	5	16
	Short; less than 7 cm. long . . . . .	30	33
	Total . . . . .	35	50

*Position of the Scraping Edges*

		C 2.	M. GAMMA.
Pointes Moustériennes	Scraping edge on right . . . . .	6	3
	Scraping edge on left . . . . .	1	2
	With two scraping edges . . . . .	2	7
	Total . . . . .	9	12
Racloirs	Scraping edge to right . . . . .	8	15
	Scraping edge to left . . . . .	9	12
	With two scraping edges . . . . .	2	9
	Undetermined . . . . .	16	14
	Total . . . . .	35	50

<sup>1</sup> The "pointes" and "racloirs" of the simple type are alone included here.

By the preceding tables M. Gamma seems to have rather a better showing than the older C 2.

Of specimens in flint, C 2 provided 72 against 172 chips, or 30% against 70%. Of specimens in flint, M. Gamma provided 90 against

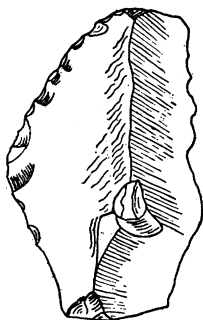


FIG. 91.

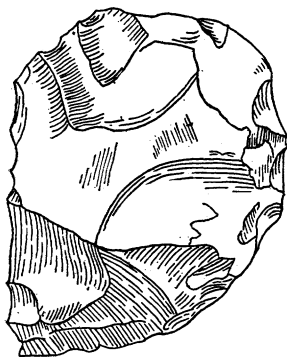


FIG. 92.

192 chips, or 32% against 68%. The proportion is, however, surprisingly like, and still more goes to show the exceeding richness of the station.

In "pointes Moustériennes" the two trenches are nearly even; the relative proportion of this much sought specimen is not high.

From long experience, when a "pointe" or "racloir" is placed point upward, one is accustomed to think of the principal scraping edge as being on the right. The tables show a slight preponderance, but not enough to theorize about, let alone to put forth any idea as to right- or left-handedness or ambidexterity.

It goes without saying that the retouched scraping edge is on the face other than that carrying the bulb of percussion; this, however, is not universal. When the "lower" face is looked at, there is a tendency for the bulb of percussion to be at or near one rather than under the scraping edge (as of course it should not be), or opposite the scraping edge (as it would seem it should be).

There are several interesting specimens of "pointes" and "racloirs"; not a few "racloirs dégagées" with one end turned up, and "hashers," more or less semilunar in shape, which purposely or otherwise often carry much of the original limestone crust (for easy grasping).



It is not necessary to take quite seriously all the discussion as to hafting of the flints from Chelles to La Madeleine inclusive. All the ethnological parallels available do not furnish proof that one paleolithic implement was hafted; all the contrary evidence in the world will not convince one who has studied the specimens "with concavity," i. e. with a hollow, with or without a distinct stop-ridge forward of the hollow, that the implements were not hafted. It does not look like accident or selection; it appears like "preconceived form"; it may be any one or all three.



FIG. 93.



FIG. 94.

The nuclei are interesting for a Mousterian station; some challenge Grand Pressigny. From "C 2" are two big ones, 60 and 55 cm. high respectively, and four small ones suitable for sling-stones(?). These have 6, 9, 9, and 7 faces in order besides the base; one face may be natural. "M. Gamma" produced nine of ordinary type, a sling-stone with nine faces, and a high carinated specimen with secondary chipping on the front; this looks like the beginning of the succeeding epoch.

The patination of specimens is interesting. The phenomenon of double patination is not rare, and is of especial interest and original research to the Doctor himself.

In America (especially among the late Dr Winchell's specimens) and in England (among Dr Sturge's Mildenhall flints) double patination occurs again and again.

The alteration of surface often goes very deep or quite through the specimen.

It occurred to the writer that an examination of the specific gravity of a series of specimens ranging from unaltered flint to the most changed would show graphically the effect of exposure. The work was done by Mr W. G. Foye under the kind direction of Professor Charles Palache of Harvard University.

*Specific Gravity of Specimens*

	SPECIFIC GRAVITY.	FIG.	SIZE.	MUSEUM No.
Nucleus dark, unpatinated, lustrous...	2.535	86	I : I	E. 604
Long "racloir," unpatinated, lustrous..	2.542	87	I : I	E. 544
Triangular "racloir," much patinated..	2.285	88	I : I	E. 580
Small knife; partly altered. ....	2.260	89, 90	I : I	E. 766
Flat flake, altered yellow patina.....	2.225	91	I : I	E. 595
Doubly chipped fragment, yellow patina	2.225	92, 93	I : I	E. 601
Thick chip, white, much altered.....	1.692	94	I : I	E. 564

This table is striking enough and tells its own story. Until however, more is known of the causes and processes of patination and what may be called "*cachalonnement*" of flint, it is quite useless to draw conclusions as to great duration of exposures.

The crowning glory of La Quina is the quantity of animal bones, showing traces of flint tools, that are there found.

The table that follows gives some idea of the result of excavation.

*Specimens in Bone, Horn, Antler, etc.*

C 2.		M. GAMMA.	
SCRATCHED		SCRATCHED	
Identifiable.....	5	Identifiable.....	6
Not identifiable.....	67	Not identifiable.....	86
Total.....	72	Total.....	92
NOT SCRATCHED		NOT SCRATCHED	
Identifiable.....	56	Identifiable.....	21
Not identifiable.....	281	Not identifiable.....	235
Total.....	337	Total.....	256
PERCENTAGE OF 409		PERCENTAGE OF 348	
Identifiable, scratched.....	.012	Identifiable, scratched.....	.017
Not identifiable, scratched..	.164	Not identifiable, scratched..	.247
Identifiable, not scratched..	.137	Identifiable, not scratched..	.061
Not identifiable, not scratched	.687	Not identifiable, not scratched	.675
Total.....	1.000	Total.....	1.000

Dr Henri Martin's warning to save all the fragments, as from one-quarter to one-half carried human markings, was somewhat sceptically received, and it was not until after careful washing and examination through a glass that his words became justified.

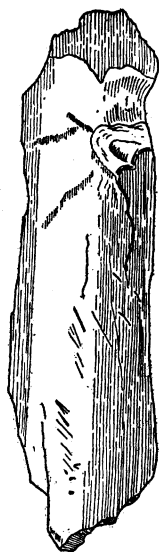


FIG. 95.

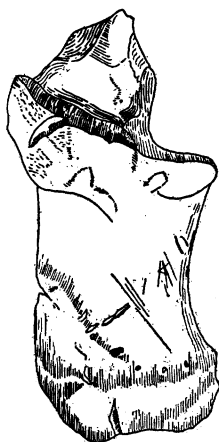


FIG. 96.

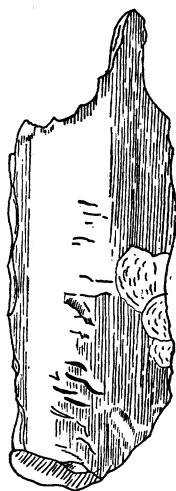


FIG. 97.

In the table every specimen that did not seem surely flint-marked was thrown out of the "scratched" list, yet from M. Gamma there is a proportion of .264. These markings are not at all due to drying and splitting of the bones, nor to gnawing; their localization and parallelism, even if the individual scratches could not determine the point, are conclusive.

Besides the horse and bison phalanges and humeri the small fragments carry a great many marks.

The discussion as to the way these came to be is all more or less convincing. Ordinary cutting and scraping to get off meat and skin will not account for many localized phenomena; disarticulation and more vigorous use of the bones subjectively or objectively must be invoked.<sup>1</sup>

<sup>1</sup> See figures 95, 96, and 97. The identifications were kindly made by Dr Glover M. Allen of Harvard University.

Most of the bones found during the visit can be referred, if identifiable at all, to the bison, ox, horse, fallow deer, and reindeer.

Great numbers of teeth of various animals were found; they resist decay.

It is not to be forgotten that a superb fragment of mammoth tusk lay in situ at the time of the Angoulême Congress.

No human bones were found during the ten days.

There is further study to be done and problems of importance to be worked out. A little piece of manganese found at the time with scratches suggests paint and color; the suggestion is all that is needed for one who has in mind the "*rapprochements avec l'Aurignacien*."

The whole of the reason for the bone markings is not known. The quartz specimens, of which there are a fair number, deserve study in connection with similar specimens from the Columbian gravel at Trenton.

The human remains found at La Quina are still *sub lite* and daily prayers for more are offered to complete the testimony.

A field of fair chance, charming hospitality, and lovely nature is La Quina.

Among his generous gifts, Dr Henri Martin included a maquette of the La Quina skull in situ and a reconstruction of the head. Dr E. A. Hooton of Harvard University has kindly consented to add his comments on the latter.

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#### NOTE ON THE LA QUINA SKULL

DR HENRI MARTIN has proceeded along right lines in his reconstruction of the Neanderthaloid type on the La Quina skull in so far as he has used a cast of the skull upon which to build up the soft parts of the head. The result of his labors is most interesting, but to me not altogether satisfactory.

In the first place Dr Martin has not given the specimen a sufficiently powerful musculature. It is inconceivable that the massive La Quina mandible should have been associated with such an attenuated temporal muscle. Even if the area of attachment on the skull was not extensive,

the muscle must have been very thick—thick enough to fill out the temporal fossa and to mask the projection of the zygomæ which is so marked in Dr Martin's finished reconstruction. A similar criticism applies to the restoration of the muscles attached to the occiput. The immense occipital torus afforded attachment for short powerful muscles; not for the long slender muscles indicated in the bust modeled by Dr Martin. In general the neck is much too long and slim.

In his reconstruction of the soft parts of the face Dr Martin states that he has been inspired by observations of the facial characters of the chimpanzee. Since I believe that the Neanderthaloid type, in spite of its many simian characters, was an essentially human type, I cannot admit the legitimacy of this method of restoration. Dr Martin has given his La Quina specimen the face of an anthropoid ape. Neither the fragmentary remains of the facial skeleton of the La Quina skull nor the fairly extensive comparative material in other Neanderthaloid crania justify such a reconstruction.

I nevertheless feel that science is deeply indebted to Dr Martin for his conscientious and painstaking work on the osseous remains of the La Quina Man, which has resulted in the addition of another invaluable specimen of the Neanderthaloid type to supplement our knowledge of this most interesting fossil race.

E. A. HOOTON

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